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# UNDERSTANDING SMART INFRASTRUCTURE (CLOUD & BIG DATA)

# Agenda

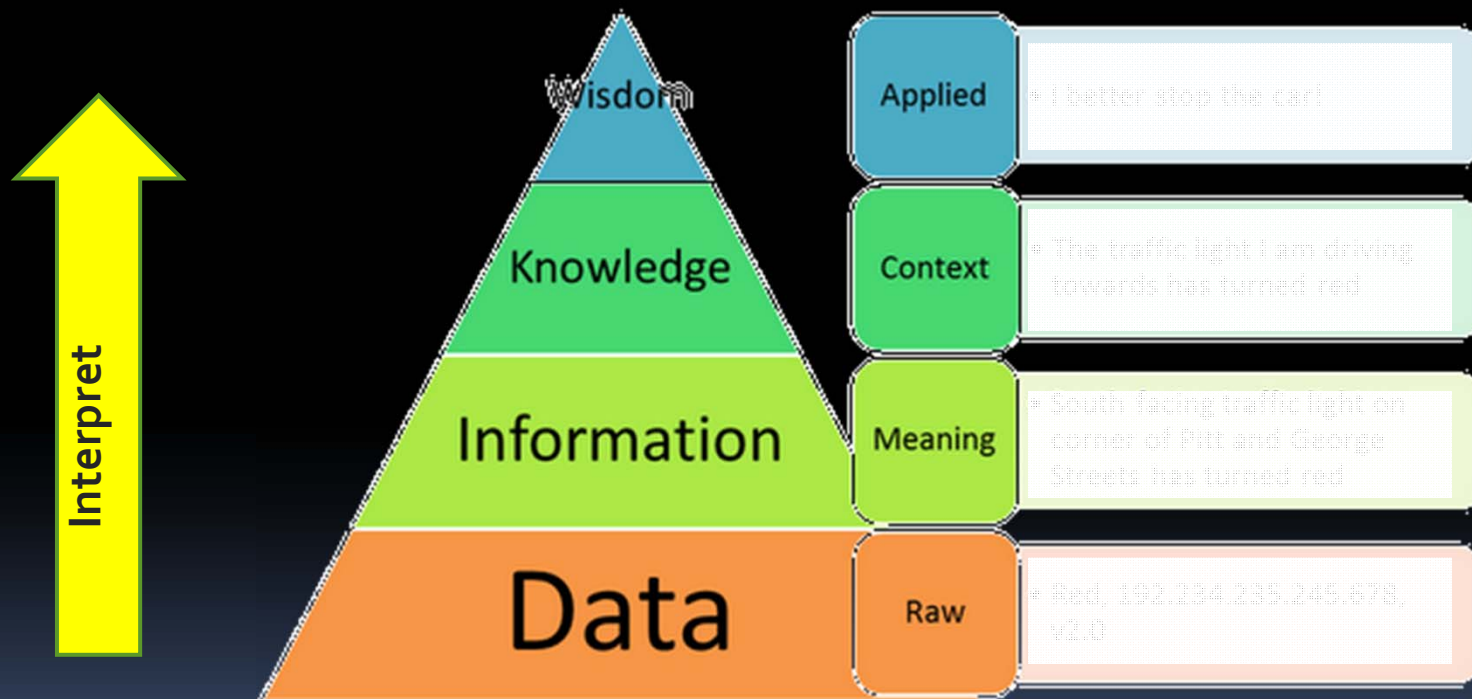
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- Set the stage
  - Understand more about what Data is
  - What is Big Data
  - Know more about Cloud – view from inside & outside
  - Why Now?
- Opportunities – The Benefits
  - Value creation
  - Benefits for individual; society – Smart Cities
  - Ownership
- Concerns – the risks
  - Good intentions gone wrong
- Public Policy Issues



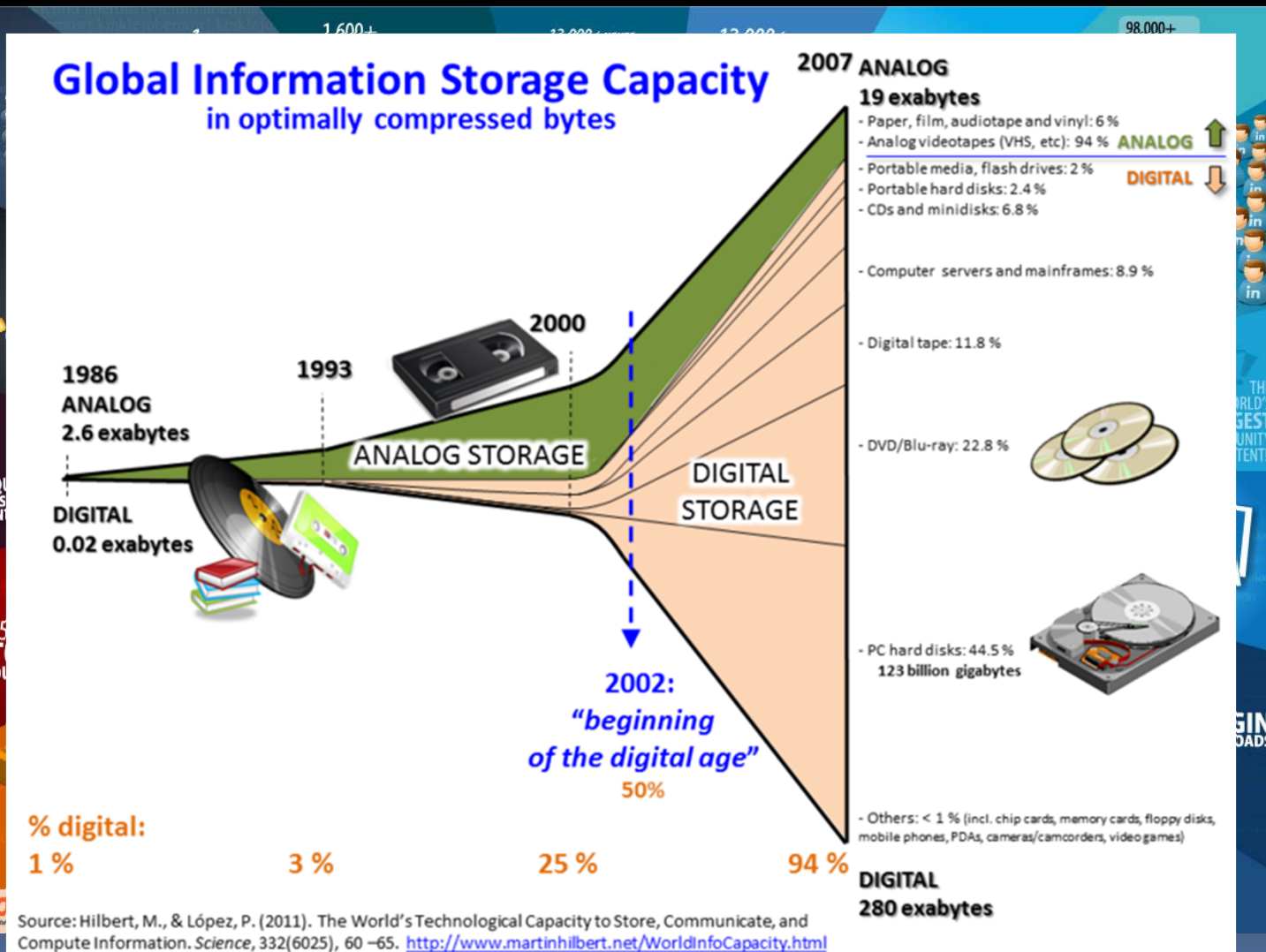
# Set the Stage...

## What are Characteristics of Data



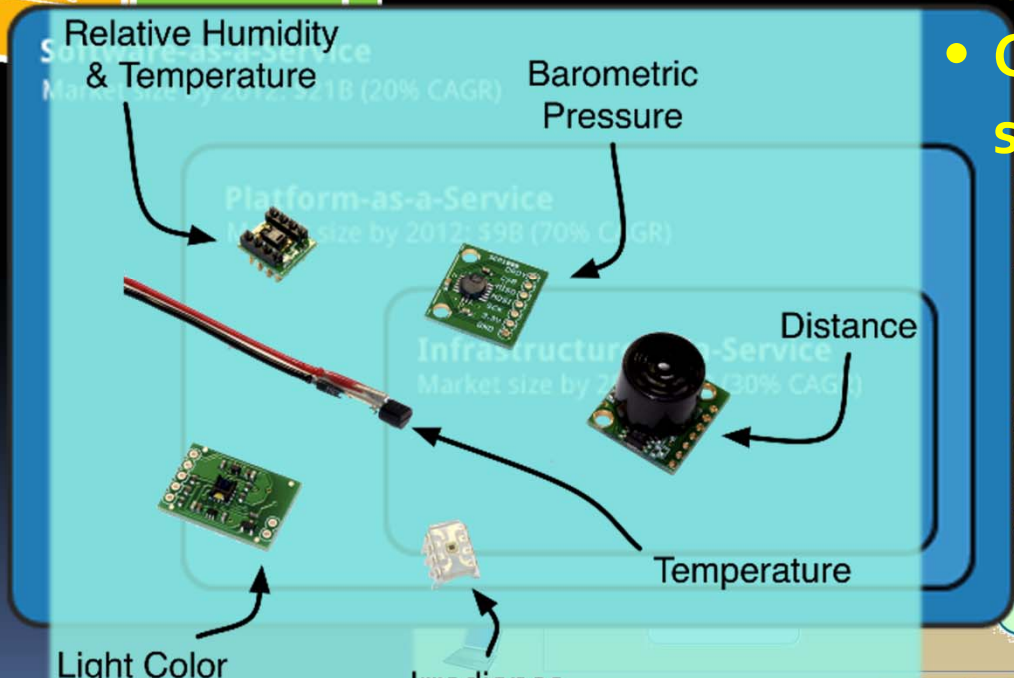
Courtesy: Agnes McDonald

# How fast is it growing?

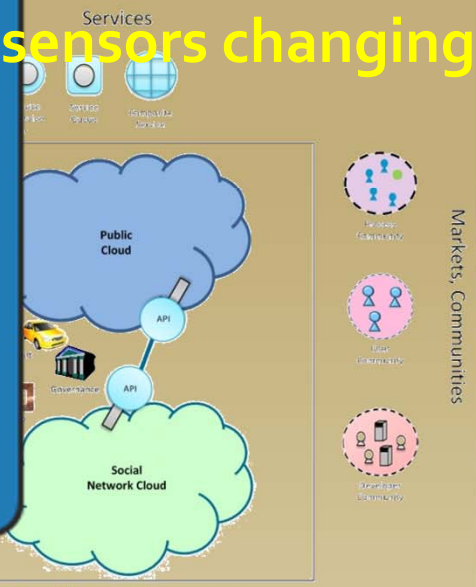


# Drivers

## Why is this happening now?



- Keys
- Ecosystem maturing
- Standards now exist
- Cost and scope of sensors changing



# Set the Stage...

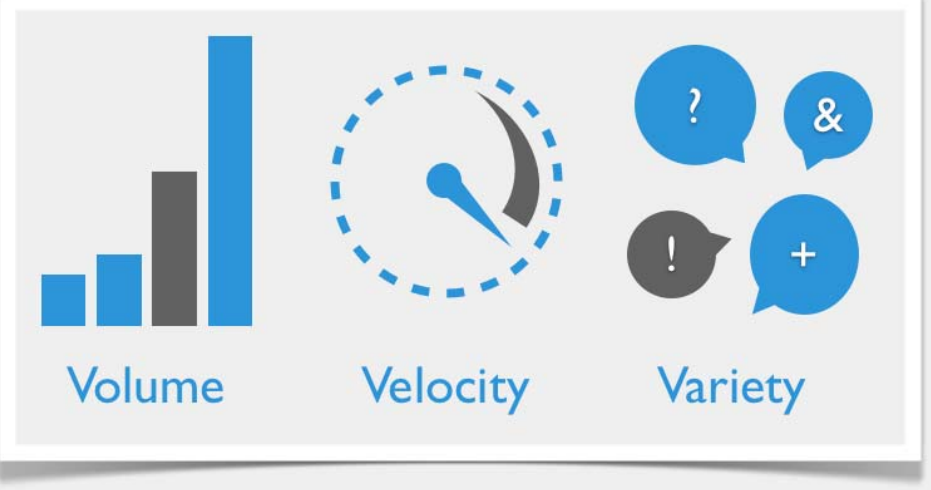
## What makes Data 'Big'

- 3 V's (Volume, Velocity, Variety) (Veracity)
- Capture as much as possible

- M (Management) (Planning)

- M (Measurement) (Varying quality)

- C (Context)



**Correlations**

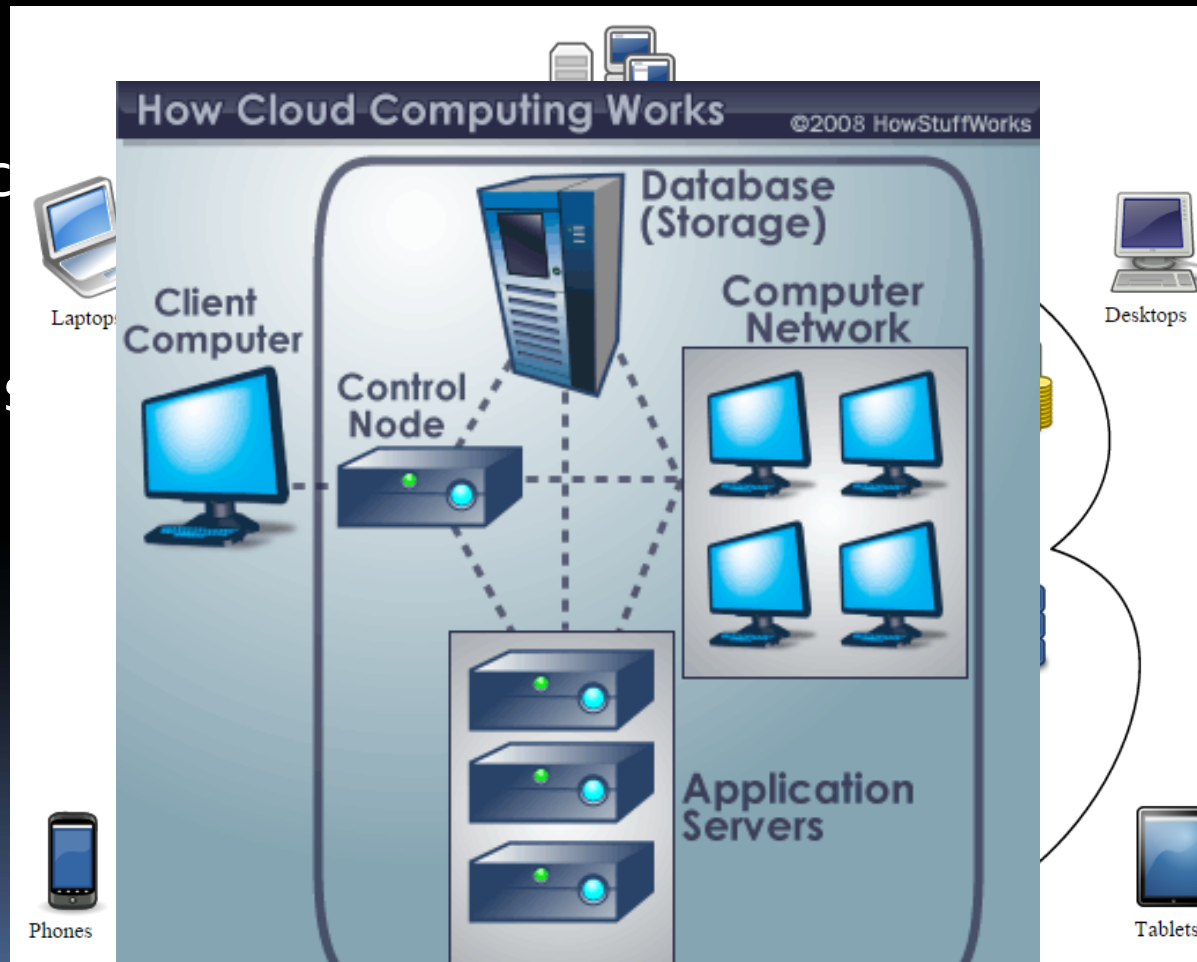
- People seek causes
- We know the 'what' well before the 'why'.

Key policy difference: COLLECTION v. USE

# Set the Stage...

## More about Cloud Computing

- Outside:
  - How we access
- Inside:
  - What makes



# Who Benefits?

## Where are the benefits of BD and Cloud Computing?

### The enterprise

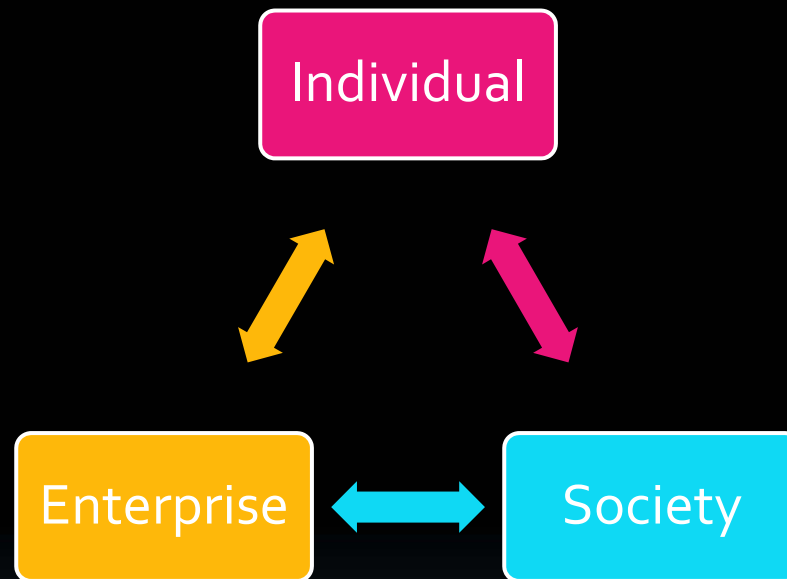
- Changing business model
- HR
- Transport

### The Individual

- Improved offers
- Roads less travelled
- Medicine

### Society at Large

- Climate Change
- Education
- Crime prevention



- Legal side effects
- Altered perceptions



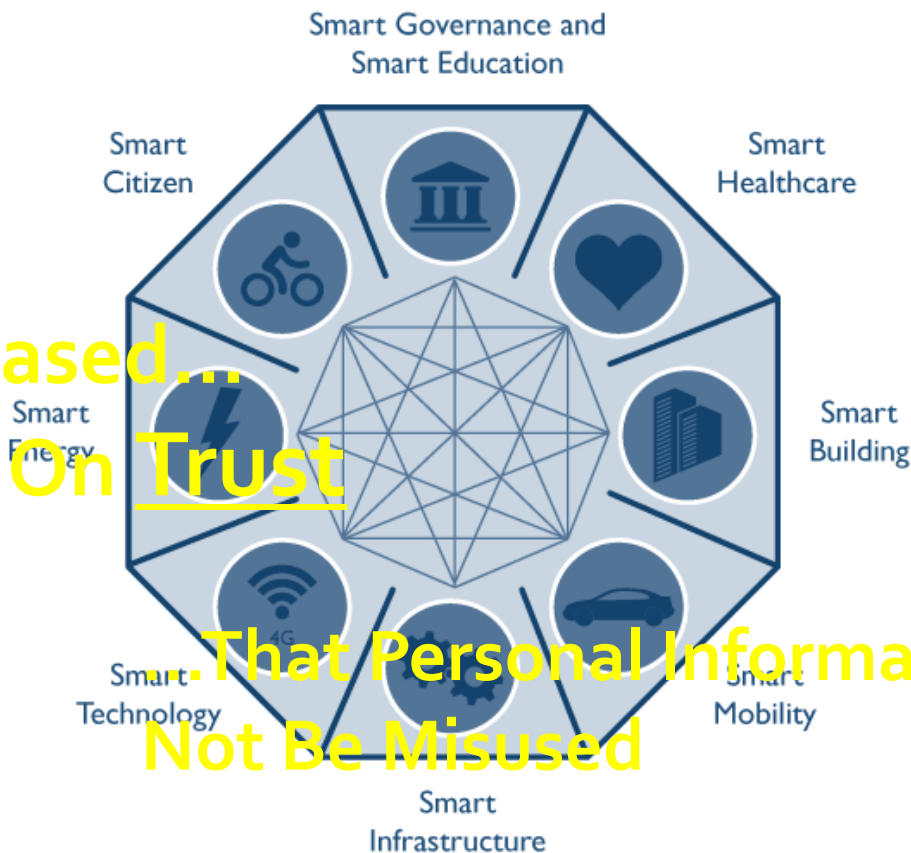
# Who Benefits

## What are the Pros and Cons of Cloud



# Apply to SSC

## SMART CITY CONCEPTS



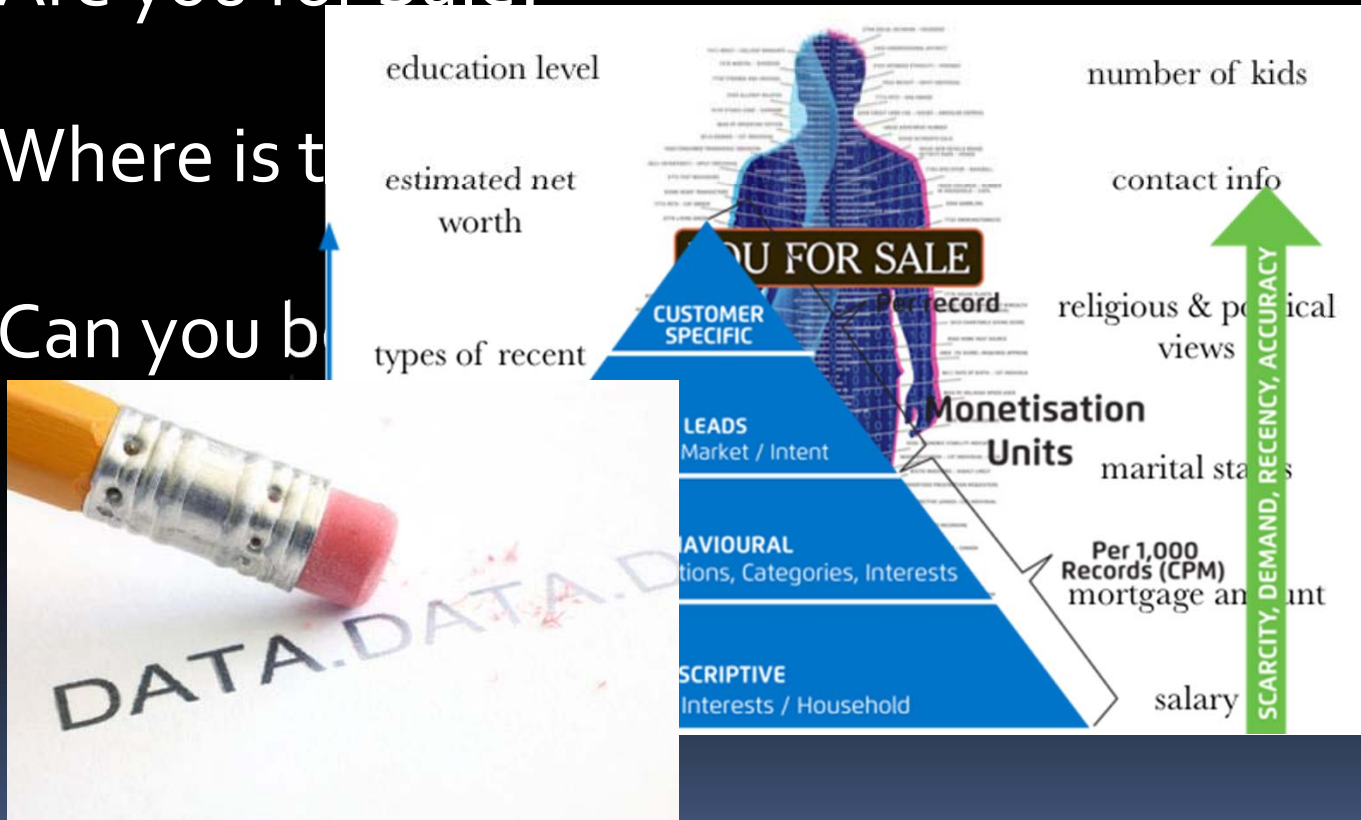
**But,  
Benefits Based...  
On Trust**

**That Personal Information Will  
Not Be Misused**

# Outcomes leading to Concerns

## What might impact Trust?

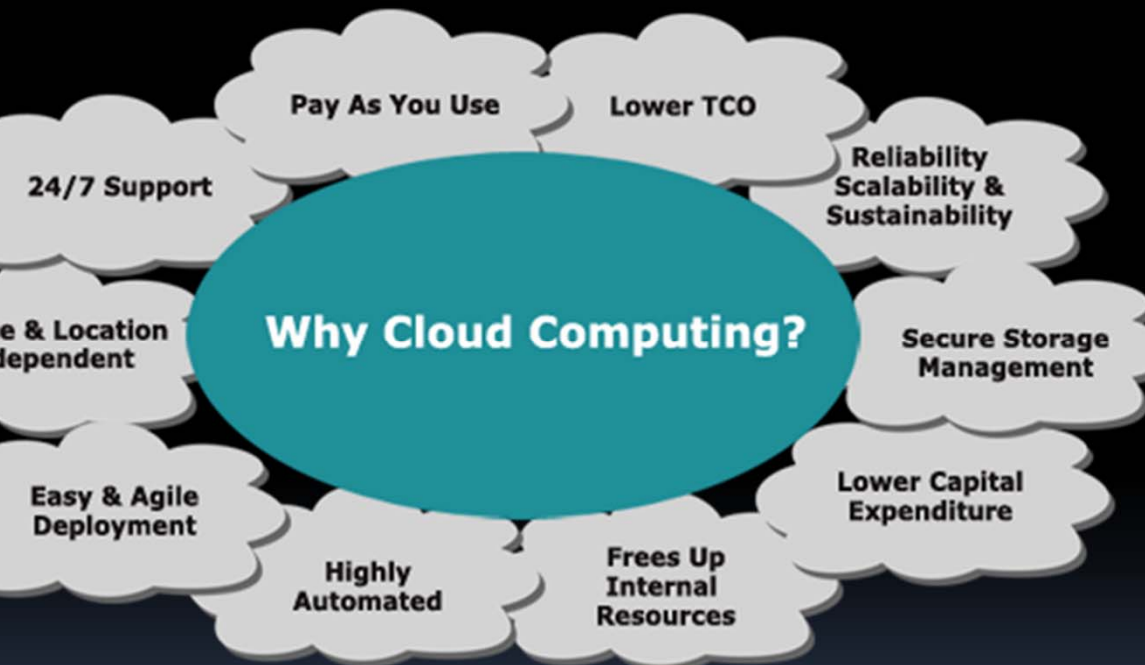
- Are you for Sale?
- Where is t
- Can you b



Think twice, click once...

# Success Factors

## Why Cloud?



### • Key Points

- Reliability
- Storage Mgmt
- Lower Capital Outlay
- Scalable
- Device Independence
- Pay for what you use

# Success Factors

## What Does This Bring?

### Reasons Businesses Use the Cloud

Every year, more and more businesses are adopting cloud. While the initial adoption is often an IT decision, cloud is increasingly being considered a business decision to improve company functions. Take a look at the reasons why more businesses are adding cloud to their technology arsenals.

**1 It offers better insight and visibility**

Businesses are using cloud technology to support their analytics efforts. Of leading organizations:

- 54% use analytics extensively to drive insights
- 59% use cloud to share data seamlessly across applications

**2 It makes collaboration easy**

Cloud allows work to be accessed from anywhere on multiple devices, making cross-functional collaboration much easier. Here's what leading organizations—those that are gaining competitive advantage through cloud—cited as popular uses:

- 58% collaborate across the organization and ecosystem
- 59% improve integration between development and operations

**3 It can support a variety of business needs**

Companies are forging a tighter link between technology and business outcomes. Take a look at the business functions companies have migrated to the cloud.

- 18% messaging
- 15% storage
- 13% office/productivity suites

**4 It allows for rapid development of new products and services**

The cloud offers businesses valuable capabilities. Here's what leading organizations say it enables them to do:

- 52% use it to innovate products & services rapidly
- 24% are able to offer additional products & services

**5 The results are proven**

From business growth to increased efficiency, businesses using cloud are realizing benefits across the company.

- 25% of businesses saw a reduction in IT costs
- 55% saw an increase in efficiency
- 49% saw improvement in employee mobility

### Reasons for the Cloud

#### Insight

use of collaboration business leads rapid development proven

- Automotive
- Security
- Services
- Consumer goods

Technology, but a concept by Multiple Technologies Advances"

Gartner

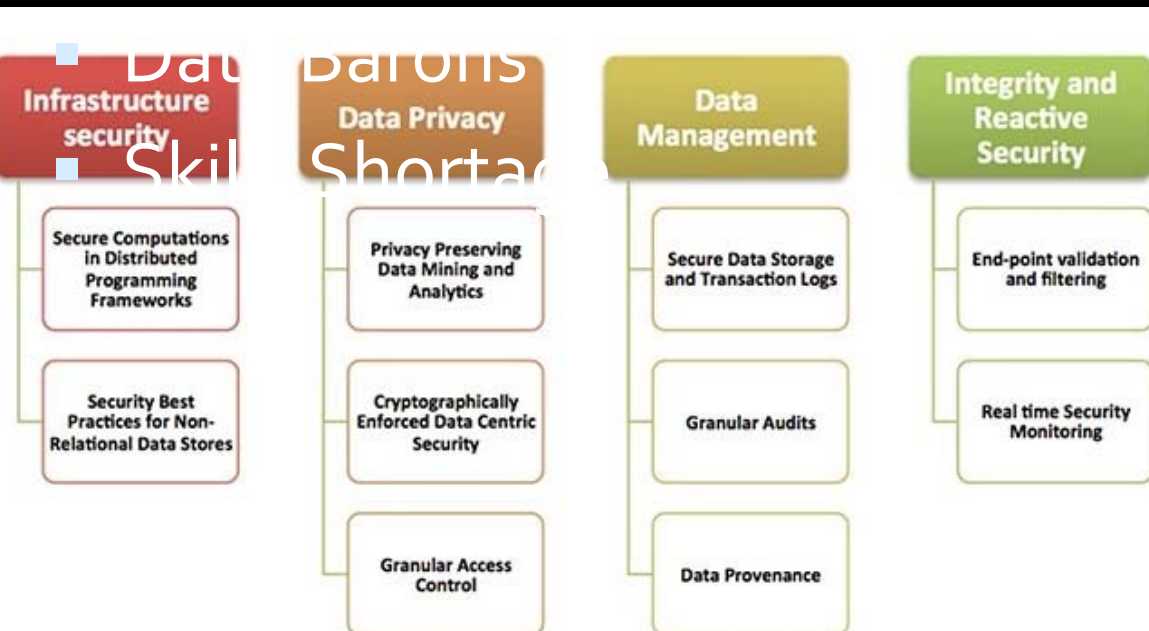
# Success Factors

## Avoiding pitfalls/traps/obstacles to success

- Maintain Public Trust
- Cloud Safety

- Keys

- Infrastructure Security
- Data Privacy
- Data Mgm't
- Integrity



# Wrap...

- ...
- What do we know now
  - What is Data and What makes it 'Big'
  - What is Cloud Computing
  - What are the Drivers
- Opportunities & Considerations
- Existing models
- Policy Considerations

**Thank You**